

What is claimed as the invention is:

1. A circuit for unobtrusively masking transient signals in an electronic device, said circuit comprising:

5 an amplifier having a gain control input for receiving digital data and a signal input;
a register having an output coupled to said gain control input;

10 an adder coupled to said register for storing data in said register and having a pair of inputs, said adder having a control input for adding or subtracting data on the inputs of the adder;

15 wherein said adder adjusts the gain of said amplifier in accordance with the signal on said control input.

20 2. The circuit as set forth in claim 1 and further including a control loop coupled to said adder for holding the gain of said amplifier at a predetermined value.

25 3. The circuit as set forth in claim 1 and further including a summation circuit coupled to said signal input, wherein said summation circuit includes several inputs.

30 4. The circuit as set forth in claim 3 wherein said summation circuit further includes logic for selecting one, all, or combinations of signals from the several inputs for summation.

5. A method for muting a signal, said method comprising the steps of:
35 increasingly attenuating the signal at a first rate until a maximum level of attenuation is reached,

holding the signal at the maximum level of
attenuation for a controlled period; and
decreasingly attenuating the signal at a second
rate.

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6. The method as set forth in claim 5 wherein the
first rate is substantially the same as the second rate.

7. The method as set forth in claim 5 wherein said
10 step of increasingly attenuating the signal includes the
steps of;

applying the signal to an amplifier having an input
for digital gain control; and

15 applying a series of decreasing numbers to the
input.

8. The method as set forth in claim 5 wherein said
step of decreasingly attenuating the signal includes the
steps of;

20 applying the signal to an amplifier having an input
for digital gain control; and

applying a series of increasing numbers to the
input.

25 9. The method as set forth in claim 8 wherein said
step of applying a series of increasing numbers to the
input is terminated when a predetermined number is
reached in the series.

30 10. The method as set forth in claim 9 wherein the
numbers are consecutive.

11. The method as set forth in claim 7 wherein the
numbers are consecutive.

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12. In a telephone having at least one internal switch, the improvement comprising a soft mute circuit for masking transients in the telephone.

5 13. The telephone as set forth in claim 12 wherein
said soft mute circuit includes:

an amplifier having a gain control input for receiving digital data and a signal input;

a register having an output coupled to said gain
10 control input;

an adder coupled to said register for storing data in said register and having a pair of inputs, said adder having a control input for adding or subtracting data on the inputs of the adder;

15 wherein said adder adjusts the gain of said
amplifier in accordance with the signal on said control
input.

14. The telephone as set forth in claim 13 wherein
20 said telephone includes a summation node and said
summation node is coupled to said signal input.